



AF/3671

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Norbert Wolters et al
Examiner: Nathan Scott Mammen
Serial No.: 09/7²1,512
Filed: 22 November 2000
For: AGRICULTURAL HEADER WITH CHOPPER

Group Art Unit 3671

(Atty. Ref. No. 08876-US)

Moline, IL 61265

20 August 2002

#11
Brief
Jes
9/11/02

APPLICANT'S APPEAL BRIEF

The Honorable Commissioner
of Patents and Trademarks
Washington, D.C. 20231
Sir:

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GROUP 3600

Real Party in Interest

The real party in interest is Deere & Company, a Delaware Corporation having its principle place of business in Moline, IL. Deere & Company became the real party in interest by an assignment dated 16 January 2001 and recorded with the Patent Office on 19 March 2001, Reel 011637, Frame 0157.

Related Appeals and Interferences

The applicant is unaware of any related appeals and/or interferences.

Status of Claims

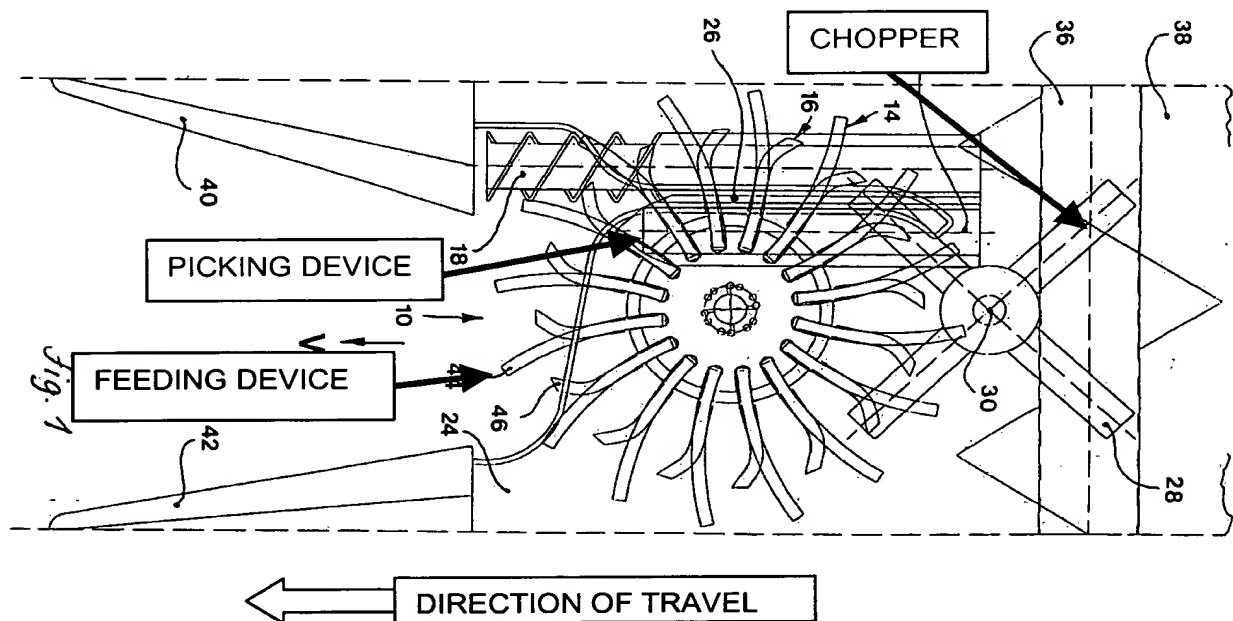
Claims 1-21 are currently pending in the above-identified application. Claims 1-21 stand finally rejected, by the examiner. A correct copy of the claims is found in the attached appendix.

Status of Amendments

There are no outstanding amendments.

Summary of the Invention

A feeding and picking device 10 for a standing agricultural crop is provided with a rotating feeding device 14 and 16. The feeding device 14 and 16 is rotated about a vertical feeding axis engages the standing crop and directs it to a picking device. The picking device comprises a snapping channel 26 formed by snapping bars 24 under which is located snapping rolls 18 and 20. For standing corn the snapping rolls 18 and 20 pull the corn stalk downwardly. The snapping channel 26 is too small for the ears of corn so the ears are snapped off the stalks. A chopping device 28 is located beneath the picking device 18, 20 and 26 for chopping the corn stalks that have been engaged by the snapping rolls 18 and 20. The chopping device 28 defines a chopping radius that overlies the feeding radius of the feeding device 14. The chopping device 28 is rotated about a vertical axis. The chopping radius of the chopping device 28 overlaps the feeding radius of the feeding device 14 and 16 making a compact feeding and picking assembly.



Issue

The issue is:

1. Does PCT reference WO 99/03323 disclose a feeding radius of a feeding device that overlaps the chopping radius of the chopping device?

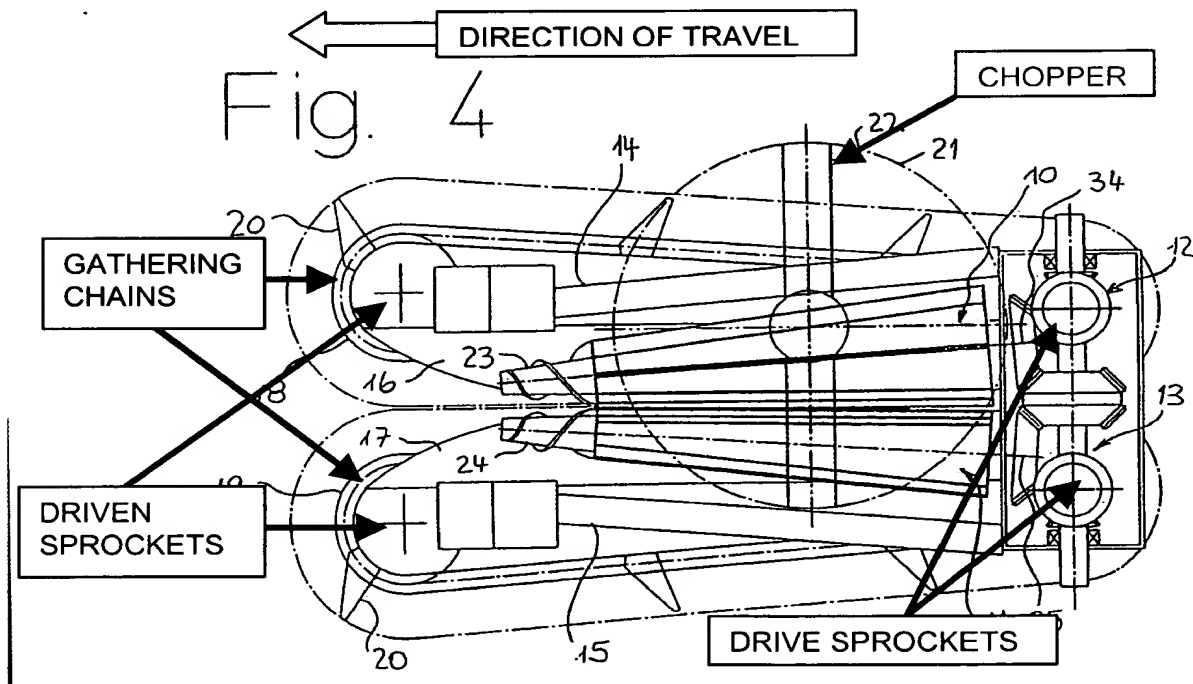
Grouping of Claims

Claims 1-21 stand and fall together.

Argument

Rejection

The currently pending claims include one independent claim, claim 1. Claim 1 is directed to a feeding and picking device for a standing agricultural crop that is equipped with a chopping device for chopping plant stalks. The Examiner finally rejected pending claims 1-3, 5, 7, 9 and 10, under 35 USC 102(b), as being anticipated by WO 99/03323. The examiner's position is that WO 99/03323 discloses a feeding and picking device for a standing crop wherein a feeding device is formed by gathering chains 18 and 19 that extend between a driven sprocket and a drive sprocket. The examiner asserts the gathering chain defines a feeding radius. The WO 99/03323 device also comprises a chopping device 22. The chopping device has a chopping radius. The examiner's position is that the feeding radius and the chopping radius overlap.



The examiner finally rejected dependent claims 4 and 8, under 35 USC 103, as being obvious over WO 99/03323.

The examiner finally rejected claims 11-20, under 35 USC 103, as being obvious over WO 99/03323 in view of Herron et al (US Patent 6,032,444).

The examiner finally rejected claim 21, under 35 USC 103, as being obvious over WO 99/03323 in view of Miller (US Patent 4,148,175).

Issue

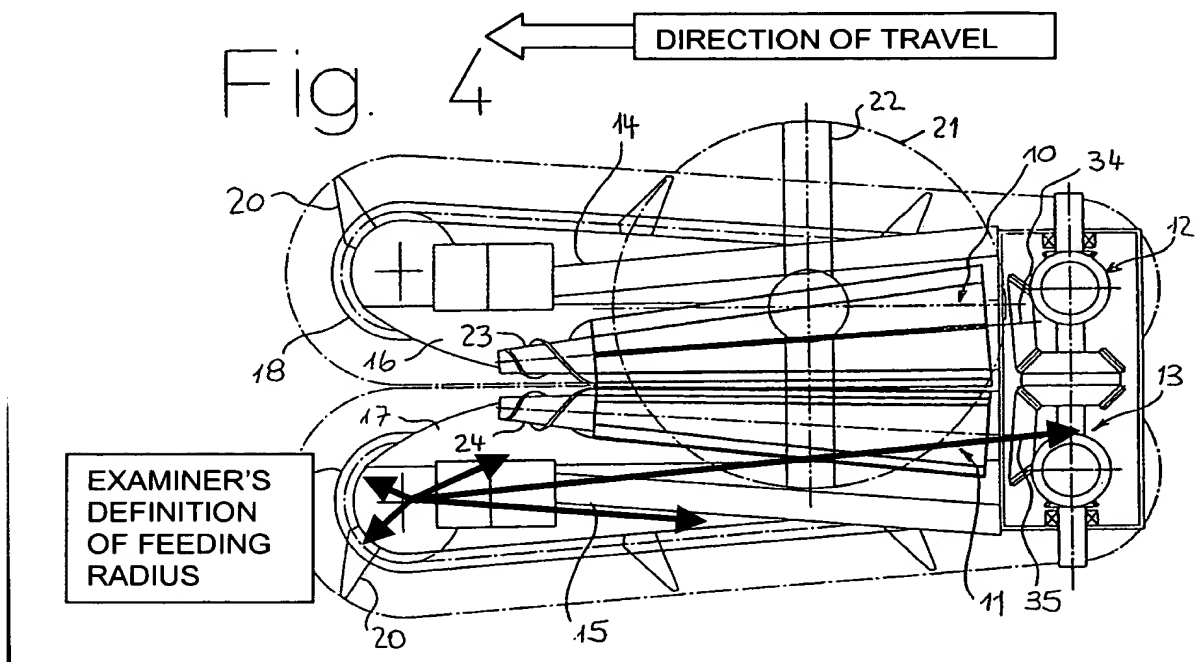
This is truly a case of first impression.

WO 99/03323 discloses a feeding and picking device having a relatively conventional feeding assembly comprising two gathering chains that follow an oblong path. The applicant asserts that the oblong path does not define a feeding radius as called for in pending independent claim 1. As such, the chopping radius of the chopping device does not overlap the non-existent feeding radius.

It is the examiner's position that each of the rotating gathering chains (18, 19) have a feeding radius. The examiner defines the center of the feeding radius as being the center of the feed chain driven sprocket. The feeding radius extends from this center to any chain position. The examiner stated:

"A geometric shape that has a portion of its surface defining a circular or partially circular shape, such as an ellipse defined by gathering chains in the WO 99/03323 publication, inherently has a radius."

The examiner's definition is entirely too broad. For example, the examiner's definition would essentially define the radius of a bicycle chain as extending from the center of the rear driven sprocket to the outer circumference of the front drive sprocket. The examiner's radius definition, as applied to WO 99/03323, is illustrated in red in the following drawing.



Each gathering chain 18 and 19 extends between a driven sprocket and a drive sprocket. Each sprocket defines an axis of rotation. Between the sprockets the chain follows a straight tangential path to the other sprocket. There is no radius defined by this straight tangential path. At best each gathering chain defines two semi-circular radius portions defined by the engaged portion of each sprocket. Neither semi-circular radius portions overlap the chopping radius.


Anticipation, under 35 USC 102, requires that a single prior art reference teach every aspect of the claimed invention either expressly or inherently. See Verdegaal Brothers Inc. v. Union Oil Company of California, 814 F.2d 628, 631, 2 USPQ 1051, 1053 (Fed. Cir. 1987). WO 99/03323 does not teach the overlapping feeding radius and chopping radius. Therefore WO 99/03323 does not anticipate claims 1-3, 5, 7, 9 and 10, and as such, dependent claims 4, 6, 8 and 11-21 are also valid.

Reversal of the rejection is respectfully requested.

Any fees or charges due under 37 CFR 1.17(f) or otherwise due as a result of

filing of the present paper may be charged against Deposit Account 04-0525. Two duplicates of this page are enclosed.

Respectfully,



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Date

Deere & Company

Condy Whitacre 20 Aug 2002
Signature Date

Appendix

1. A feeding and picking device for feeding and picking a standing agricultural crop wherein individual plants in the crop are provided with plant stalks, the device comprising a rotating feeding device having a feeding radius, the rotating feeding element grasp plant stalks and directs the plant stalks to a picking device which separates useable parts from the plant stalks, a chopping device chops the plant stalks, the chopping device has a chopping radius that overlaps the feeding radius of the feeding device.

2. A feeding and picking device as defined by claim 1 wherein the feeding element acts as a counterknife to the chopping device.

3. The feeding and picking device as defined by claim 1 wherein the picking device has a length and the chopping radius of the chopping device extends throughout the length of the picking device.

4. The feeding and picking device as defined by claim 3 wherein the chopping radius of the chopping device extends to an area upstream from the picking device.

5. The feeding and picking device as defined by claim 1 wherein the chopping device has a chopping axis and the feeding axis of the feeding device correspond to one another.

6. The feeding and picking device as defined by claim 1 wherein the picking device has a rear end and the chopping device is mounted on the rear end of the picking device.

7. The feeding and picking device as defined by claim 1 wherein the feeding device is provided with an upper feeding element which is mounted above the picking device.

8. The feeding and picking device as defined by claim 1 wherein the feeding device is provided with a lower feeding element which is mounted beneath the chopping device.

9. The feeding and picking device as defined by claim 1 wherein the feeding device is provided with an upper feeding element and a lower feeding element, and the chopping device is provided with at least one chopping knife, the chopping knife being located between the upper and lower feeding elements.

10. The feeding and picking device as defined by claim 9 wherein at least one of the lower feeding element and the upper feeding element is designed to transport grasped plants throughout the length of the picking device.

11. The feeding and picking device as defined by claim 10 wherein the upper feeding element has a leading surface with a rejecting transporting action and a trailing surface with an aggressive transporting action.

12. The feeding and picking device as defined by claim 11 wherein the chopping device has a chopping axis and the feeding axis of feeding device are approximately parallel to one another.

13. The feeding and picking device as defined by claim 12 wherein the chopping axis is substantially vertical.

14. The feeding and picking device as defined by claim 13 wherein the chopping device rotates in a chopping direction and the feeding device rotates in a feeding direction, the chopping direction and the feeding direction are identical.

15. The feeding and picking device as defined by claim 13 wherein the chopping device rotates in a chopping direction and the feeding device rotates in a feeding direction, the chopping direction and the feeding direction are opposite.

16. The feeding and picking device as defined by claim 13 wherein the chopping knife has a front cutting edge and a rear cutting edge.

17. The feeding and picking device as defined by claim 13 wherein the chopping knife is rigidly mounted to the chopping device

18. The feeding and picking device as defined by claim 13 wherein the chopping knife is suspended from the chopping device so that it oscillates.

19. The feeding and picking device as defined by claim 13 wherein the chopping knife has a smooth edge.

20. The feeding and picking device as defined by claim 13 wherein the chopping knife has a splicing knife.

21. The feeding and picking device as defined by claim 1 further comprising a guiding mechanism for depositing chopped plant material in the form of a windrow.